

What is Claimed is:

Claim 1. A tube support bracket that comprises a metal support bracket formed having a circular tube-receiving aperture and an annular, castellated collar abutting said aperture, said aperture and collar being sized for receiving therethrough in close-fitting relationship a metal tube, said collar being formed having a plurality of spaced-apart, axial tabs sized for swaging against in hoop stress and bite said received tube.

Claim 2. The tube support bracket as claimed in Claim 1, wherein an inner surface of each of said collar tabs is formed having at least one axial groove formed therein, said groove being configured for receiving exterior regions of said received tube when the collar is swaged tightly against the tube to thereby lock the tube in the collar and thus in the support bracket.

Claim 3. The tube support bracket as claimed in Claim 1, wherein said collar is formed integrally as a part of said support bracket.

Claim 4. The tube support bracket as claimed in Claim 1, wherein said support bracket and collar are formed from a ductile metal alloy.

Claim 5. The tube support bracket as claimed in Claim 4, wherein said ductile metal alloy comprises an aluminum-coated steel material.

Claim 6. The tube support bracket as claimed in Claim 1, wherein said plurality of axial tabs comprise four, equally spaced-apart tabs.

Claim 7. The tube support bracket as claimed in Claim 1, wherein said collar is formed by draw-punching a region of said support bracket.

5 Claim 8. The tube support bracket as claimed in Claim 1, wherein said received tube is constructed from an aluminum alloy.

10 Claim 9. A tube support bracket that comprises a metal support bracket formed having a circular tube-receiving aperture and an annular, castellated collar abutting said aperture, said aperture and collar being sized for receiving therethrough in close-fitting relationship an aluminum alloy heat exchanger tube, said
15 collar being formed having a plurality of spaced-apart, axial tabs sized for swaging against in hoop stress and bite said received tube, an inner surface of each of said collar tabs being formed having at least one axial groove therein, said groove being configured for receiving
20 exterior regions of said received tube when the collar is swaged tightly against the tube to thereby lock the tube in the collar and thus in the support bracket.

25 Claim 10. The tube support bracket as claimed in Claim 9, wherein said collar is formed integrally as a part of said support bracket, and wherein said support bracket and collar are formed from an aluminum-coated, ductile steel alloy.

30 Claim 11. The tube support bracket as claimed in Claim 9, wherein said collar is formed by draw-punching a region of said support bracket and wherein said plurality of axial tabs comprise four, equally spaced-apart tabs.

35 Claim 12. A method for supporting a metal tube, said method comprising the steps of:

- a. providing a ductile metal bracket;
- b. draw-punching a region of said support bracket to form an aperture having a contiguous castellated collar with a plurality of spaced-apart axial tabs, said aperture and collar being sized for receiving in close-fitting relationship a metal tube;
- c. installing a metal tube through said aperture and collar; and
- d. swaging said collar against said installed tube with sufficient radial force to cause said axial tabs to hoop stress and bite the installed tube.

Claim 13. The method as claimed in Claim 12, including the step of forming at least one axial groove into an inner surface of each of said tabs.

Claim 14. The method as claimed in Claim 12, wherein the step of swaging the collar against the installed tube is with sufficient force to cause outside regions of the installed tube to be extruded into said axial grooves.

Claim 15. The method as claimed in Claim 12, wherein the step of providing a ductile metal bracket includes forming the bracket from an aluminum-coated steel alloy.

Claim 16. The method as claimed in Claim 12, wherein the step of draw-punching a region of the support bracket includes the preliminary steps of making a hole in said region and then enlarging said hole to form a plurality of spaced-apart radial tabs.

Claim 17. The method as claimed in Claim 16, wherein the step of enlarging the hole includes forming

four equally spaced-apart radial tabs, which are subsequently formed into four equally spaced-apart axial tabs of said collar.

5 Claim 18. A method for supporting a metal tube, said method comprising the steps of:

- a. providing a ductile, aluminum-coated steel alloy bracket;
- 10 b. draw-punching a region of said support bracket to form an aperture having a contiguous castellated collar with four equally spaced-apart axial tabs, said aperture and collar being sized for receiving in close-fitting relationship a metal tube;
- c. forming at least one axial groove into an inner
15 surface of each of said tabs;
- d. installing an aluminum alloy heat exchanger tube through said aperture and collar; and
- e. swaging said collar against said installed tube with sufficient radial force to cause said axial
20 tabs to hoop stress and bite the installed tube and to cause outer regions of said installed tube to extrude into said axial grooves.

 Claim 19. The method as claimed in Claim 18,
25 wherein the step of draw-punching a region of the support bracket includes the preliminary steps of making a hole in said region and then enlarging said hole to form four equally spaced-apart radial tabs which are subsequently formed into four equally spaced-apart axial tabs of said
30 collar by the draw-punching step.